

The Files - RD-107, T. O. 5

31 December 1958

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25X1A5a1 Conference Report - [REDACTED], Radio Circuit Development

1. On 12 December 1958 a conference was held at Alcott Hall between representatives of [REDACTED] and this Agency to discuss three programs proposed by [REDACTED] as a possible continuation of the Radio Circuit Development project. Persons present at this discussion were:

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IA
- CIA

2. The attached memorandum was solicited from [REDACTED] to ascertain whether or not there were new developments or techniques that could be exploited by this Agency under the Radio Circuit Development Program, Project 2110. A brief description is given here of each of the three proposed programs. For a more comprehensive picture of each, it is recommended that the reader refer to the Attachment.

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PROGRAM "A" - In general this program is a continuation of Contract RD-107 T. O. 5 wherein the components and techniques developed but not completely understood for inclusion in the deliverable items of this contract are to be given consideration. Here [REDACTED] proposes to construct and develop two receivers utilizing differently designed IF amplifiers. The first receiver will employ double conversion whose IF selectivity will be determined by ceramic resonators. The second receiver will employ single conversion with the IF selectivity determined by a crystal filter. These two items could then be evaluated by comparison of electrical performance and physical size.


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PROGRAM "B" - Proposes to develop a communications receiver employing a tunable IF amplifier such as the 5LJ-4 Receiver and to be tunable over a few narrow bands between 3 to 30 mc. Here modular construction is to be employed, whereby, the RF amplifier, RF oscillator, tunable IF amplifier and the audio amplifier would be constructed as separate packages. These packages could then be evaluated separately or together as a complete receiver.

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PROGRAM "C" - This program proposes to exploit the capacitive and inductive properties of crystal diodes and common base transistor stages. For an explanation it is best to review the last page of the Attachment. Circuit A illustrates a conventional receiver circuit. Circuit B illustrates how the fixed capacitance and inductances have been replaced by crystal diodes and common based transistors. Circuit C illustrates a receiver constructed solely from a combination of semiconductor junctions through crystal growth. It is readily seen that the risks involved here to deliver a physical item are high, but if successful, a microminiature receiver would be available for agent work.

3. In each of the above three programs no attempt would be made to accomplish maximum miniaturization of the deliverable items, but the packages would be built with the smallest components available on the market.

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Attachment - As above

cc: R+D Subject File
Monthly Report ✓
R+D Lab *cc-7*
EP Chrono
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OC-E/R+D-EP/DWR:jd (2 January 1959)

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